City of Maricopa
Paving Plan Guideline

<u>This form is a GUIDELINE to assist in the preparation of a Paving Plan for submittal to and review by the City.</u>

REQUIREMENTS:

PLAN PREPARATION AND SUBMITTAL

Reference 'General Civil Plan Requirements' for Cover Sheet and plan preparation guidelines.
Reference 'Maricopa Approval Blocks' for applicable Approval/ Certification Blocks as required.
Reference 'City Standard Notes' for applicable notes.

1. The first submittal of the Paving Plans shall include the following items.

   A Geotechnical/ Soils Report containing, at a minimum, Atterburg Limits test results, Sieve analysis and gradation test results, and swell test results. The Report must include pavement section recommendation for all streets.

2. All elevations shown on the plan must be referenced to an approved Benchmark or TBM established by the Engineer.

3. Typical sections for each street to be improved must be shown on the detail sheet with dimensions. The sections must include the following:

   a. Right-of-way width
   b. Width of sidewalk
   c. Width of improved surface
   d. Type of curb and gutter, i.e. roll or vertical
   e. Pavement cross-section
   f. Label all easements
   g. Minimum pavement cross-slope (Inverted crowns not allowed)
   h. Street names

4. The following utility reference items must be shown on each sheet:

   a. All existing utilities must be shown in plan view
   b. All proposed utilities must be shown in plan view
   c. Utility crossings must be shown in profile view
   d. All manhole and valve box adjustments must be noted on the plan view with appropriate M.A.G. detail referenced

5. The following design items must be shown on each sheet in plan view with all applicable dimensions and standard detail identification:

    a. Existing and proposed right-of-way
    b. Existing and proposed roadway section (B/C to B/C)
    c. Existing and proposed curbs including curb type.
    d. Existing and proposed sidewalks width dimensioned
    e. Existing and proposed pavement width dimensioned
    f. Existing and proposed sidewalk ramps (MAG Standard Detail 231-A and 233-C) for proposed ramps
    g. Curb transitions with standard detail referenced
    h. Valley gutters at all locations storm water will cross the street, with width and MAG standard detail noted
        i) Show 3' valley gutters at Local Residential
        ii) Show 6' valley gutters at Collector and Arterial
    i. Proposed sidewalk ramps at mid-block or other locations, if applicable (MAG Standard Detail 233-C)
    j. Survey monuments, MAG Standard Detail 120-1, and type
    k. All existing items 'to be protected in place' must be noted
    l. All existing water wells within the right-of-way must be shown on the plan with the associated Department of Water Resources registration number. If not registered, so note on the plans.
    m. Sight distance/visibility easement
    n. City limits, where applicable
    o. Label street names
    p. Cross-reference adjacent improvement plans by plan check number
    q. Conduit crossing including traffic signal and irrigation
    r. Curb return radii per City standards (25' min. radius)
    s. Curb radii at cul-de-sacs and 'bubbles' per City standards (45' B/C min. radius)
    t. Sufficient existing off-site elevations are required, to be shown a minimum of 50' outside of the improvements in order to determine grade and direction of slope
    u. Maximum length of cul-de-sacs shall be 500'

6. The following design items must be shown on each profile view as applicable:

    a. Existing grade at right curb line
    b. Existing grade at left curb line
    c. Existing grade at centerline
    d. Proposed grade at right curb line
    e. Proposed grade at left curb line
    f. Proposed grade at right median curb
    g. Proposed grade at left median curb
    h. Proposed grade at centerline
    i. Proposed centerline elevation at curb return station on crown run-outs (Inverted crowns are not allowed)
    j. The proposed longitudinal grades must be labeled. The longitudinal grades on curves must be computed based on their true lengths. The longitudinal grades must be 0.25% minimum.
    k. Storm drain crossings with invert elevations
    l. Utility and other conduits
    m. Station all scuppers and catch basins
    n. Low points with station

7. Street geometrics must be in conformance with City/County standards and/or the City Engineer's requirements for the following items:

    a. Station and sheet reference at all match lines in plan or profile
    b. Station all changes in street alignment and all proposed improvements
    c. Gutter and centerline spot elevations at all grade breaks
    d. Gutter spot elevations at all intersections
    e. Centerline spot elevations at all intersections
    f. Centerline radii
    g. Tangent lengths between curves
    h. Tangent lengths at intersections minimum 100' perpendicular to intersections, including knuckles
    i. Pavement tapers
    j. Intersection angles
    k. Vertical curve lengths
    l. Maximum longitudinal slope changes
    m. Barrier median construction
    n. Driveway type and station
    o. Curb radii – minimum 25' radius
    p. Combination driveway and handicap ramps are 'Not Allowed'
    q. Centerline-to-Centerline offset shall be minimum 135' (feet)

8. Six-inch (6") Vertical Curb and Gutter, MAG Standard Detail 220, Type A, with 5-foot Transitions, MAG Standard Detail 221, as appropriate, is required on all streets where the curb is adjacent to a Tract and/or Open Space.

9. Vertical curves are required at all locations where grade breaks exceed an algebraic difference of:

    a. 1% on arterial streets
    b. 2% on collector and local (residential) streets

10. The following traffic engineering items must be shown in plan view, when applicable:

    a. Provide a Signing and Striping plan for arterials
    b. Street sign bases per MAG Standard Detail 131
    c. Traffic control devices
        i) Stop sign = MUTCD R1-1, 30" x 30"
        ii) Speed limit = MUTCD R2-1, 24" x 30", speed per street class
    d. Temporary turn-around at dead-end streets and phase lines
    e. MAG Standard Detail 130 Type B Barricade with an 18" x 18" or larger End of Road Marker, MUTCD OM4-3 spaced 5' on center along the barricade is required
    f. Street name signs shall be mounted on a "Telspar" tubing according to MUTCD - Contact the City of Maricopa Public Works Department for specific detail of posts
    g. Signal conduit, 3" in diameter, schedule 40 P.V.C., with ADOT #7 pull boxes at future signalized intersections (four-way)
    h. Signal conduit, 2" diameter schedule 40 P.V. C. with ADOT #5 pull boxes every 400 feet along entire length of arterial street frontage